

REMARKS

Claim 1, 2, 6, 7, 9 and 10-12 have been amended in order to recite the present invention with the specificity required by statute. Additionally, new Claims 19-20 are presented in order to more specifically recite various preferred embodiments of the present invention. Accordingly, no new matter has been added.

The Examiner has objected to the abstract of the disclosure for the formal reasons noted. In response, a new abstract is presented on a separate sheet. The new abstract addresses the Examiner's concerns.

Claims 2 and 9 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In response, these claims have been amended so as also to address the Examiner's concerns. In this regard, commonly assigned U.S. Patent No. 6,416,853 shows wet processes from preparing fire particle silicic acid. See the accompanying Information Disclosure Statement. See also specification page 10.

Claims 12, 14, 15 and 18 are rejected under 35 U.S.C. §102(b) as being anticipated by Ishigaki. Additionally, Claims 1-5, 7 and 10 are rejected under 35 U.S.C. §103(a) as being obvious over Lee, in view of Dotson. Claims 6, 8, 9, 11, 13, 16 and 17 stand rejected as obvious under various combinations of this art in further view of Sainte Marie and Seiber. This rejection is respectfully traversed in view of the foregoing amendment and the following remarks.

Lee teaches a water-metachromatic sheet which uses a paper as a support or substrate, but does not teach any sheet which uses a cloth support as recited in the pending

claims.

Dotson uses organic-based dye particles and organic-based developer particles, both being dispersed in non-contact state in a layer. Organic solvent is applied to bring both particles into contact and develop a color. This color development is caused by a chemical reaction and is not reversible. However, Doston does not teach or suggest use of water. Moreover, even if water is applied to the color-changeable sheet of Doston, both the particles are not brought into contact with each other and do not cause any color change. Although the color-changeable sheet of Doston is cited as showing a cloth support, there is simply no suggestion found in Lee or Dotson or elsewhere to combine their teachings. Nor, for that reason, has the Examiner propounded any. In fact, in view of the vast differences between Lee and Dotson, one of ordinary skill would be hard pressed to consider the two together. Accordingly, it is not at all understood why one of ordinary skill would arbitrarily select Dotson's cloth support and use it to replace the paper support in the disparate teaching of Lee.

Ishigaki teaches a liquid applicator for ink, liquid cosmetic, paint or the like, but does not teach or suggest the air communication means recited in claim 12. That is, there is no teaching Ishigaki's bottom cap 14 is removable. In fact, Ishigaki plainly teaches away from a removable bottom cap since bottom cap 14 must completely close the liquid applicator, otherwise liquid such as ink or paint would leak out from the applicator. (Additionally, Ishigaki's bottom cap 14 contacts the rear end of an ink absorber 20 and functions as a stopper. If the bottom cap 14 is removed, the ink absorber 20 would fall off out of the applicator.) Therefore, the liquid applicator of Ishigaki is not provided with any air communication means or any hole, and the bottom cap 14 would not be removable. These deficiencies are not overcome

by the secondary references. Nor does Ishigaki relate to anything concerning a water metachromatic cloth sheet as recited in Claim 9.

Finally, Seiber has no relevance towards any water metachromatic material and does not address any of the foregoing deficiencies of the prior art.

In view of the above amendments and remarks, Applicants submit that all of the Examiner's concerns are now overcome and the claims are now in allowable condition. Accordingly, reconsideration and allowance of this application is earnestly solicited.

Claims 1-20 remain presented for continued prosecution.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

1. (Amended) A water-metachromatic cloth sheet which comprises a [support] cloth and [provided on the surface thereof] a porous layer formed [of] thereon, said porous layer comprising a binder resin [to which] having fine-particle silicic acid [stands] fixed in a dispersed[ly and is] state therein, said water-metachromic cloth sheet exhibiting [capable of rendering] different transparency between a water-absorbed state and a water-unabsorbed state,

wherein said [support is a] cloth has a weight per unit area of 30 g/m² to 1,000 g/m², the amount of said fine-particle silicic acid [is held] in said porous layer [in an amount of from] is 1 g/m² to 30 g/m², and the amount of said fine-particle silicic acid [is incorporated in an amount ranging from] per 1 part by weight of the binder is 0.5 [part by weight] to 2 parts by weight [based on 1 part by weight of the binder resin].

2. (Amended) The water-metachromatic cloth sheet according to claim 1, wherein said fine-particle silicic acid [is a silicic acid having] has a two-dimensional structure produced by a wet process and a particle diameter of 0.03 µm to 10 µm, [produced by a wet process and having a two-dimensional structure,] and said binder resin is a polyurethane resin.

6. (Amended) The water-metachromatic cloth sheet according to claim 4 , wherein said cloth is [cut in] a quadrilateral cut sheet having a side of [at least] 50 cm or longer.

7. (Amended) A [water-metachromic] toy set [which comprises] comprising the water-metachromatic cloth sheet according to claim 1, and [a] means for providing water [- providing means] thereto.

9. (Amended) The water-metachromatic toy set according to claim 8, wherein said means for providing water is said writing instrument, which comprises:

a hollow main body;
a pen point member formed of [the] a synthetic resin porous member or fibrous worked member and [so] fitted to [the] a front end of the main body such that the front end of said pen point projects to the exterior from the main body and extends inwardly into the hollow interior of the main body;

[the front end of said pen point being connected to the front end of] a water absorber held in the hollow interior of said main body, said water absorber being formed of a fiber bunch [, held in said main body, and a] which is in contact with the rear end of said pen point member to provide water thereto; and

means for communicating [holes being provided at a suitable portion] air between said hollow interior of said main body [to make the water absorber communicate with the outside] and the exterior of the same.

10. (Amended) The water-metachromatic toy set according to claim 8, wherein said means for providing water is said writing instrument, which comprises:

a [holder which holds a pen point, and a] cylindrical container capable of holding water [directly in its] therein, the container being formed with an opening at a tip end thereof to communicate the interior of the container with the exterior thereof;

a [pour opening from which water is poured into the container being provided at the front end of the container; and said] pen point member having a pen point at a tip end thereof:

a holder [being so constructed as to be] which directly holds said pen point member and is detachably fitted [to the pour] in said opening of said container so that a rear end of said pen point member is exposed to [, and] the interior of said container [being hermetically closed];

when said holder is fitted [to] in said [pour] opening, said container is closed by said holder so that water is supplied to said pen point member; and

when said holder is detached therefrom, said opening is usable to supply water therethrough into the container.

11. (Amended) The water-metachromatic toy set according to claim 10, wherein [said holder comprises a cylindrical pen point holding member capable of holding a pen point at its outer surface;

said cylindrical pen point holding member being inserted from said pour opening and disposed in said container; and] a gap [being provided] is formed between [the outer surface of] said pen point member and [the inner surface of said pen point holding member;

the gap being a gap through which the interior of said container communicates with the exterior]
said holder so that, when said holder is fitted in said opening of said container [and at which the],
water is held in said gap by [the aid of a] capillary force.

12. A writing instrument for a water-metachromatic member[s with] which
[writing instrument any desired writing image is formed by means of a water on a water-
metachromatic member comprising a support and provided on the surface thereof a porous layer
formed on a binder resin to which fine-particle silicic acid stands fixed dispersedly, and] is
capable of rendering different transparency between a [liquid-]water absorbed state and a
[liquid-] water unabsorbed state and which comprises a support layer and a porous layer formed
thereon, said porous layer comprising a binder resin and a fine-particle silicic acid fixed in a
dispersed state in said binder resin[;]:

said writing instrument comprising a hollow main body, a pen point
member [attached to the] formed of a synthetic resin porous member or fibrous worked member
and so fitted to a front end of the main body [, and] such that the front end of said pen point
member projects to the exterior from the main body and a rear end of said pen point member
extends inwardly into the interior of the main body;

a water absorber held in the hollow interior of said main body[; the
front end of], said water absorber being [connected to] formed of a fiber bunch which is in
contact with the rear end of the pen point [so that said water absorber is internally suppliable with
the] member to provide water [by absorption] thereto; and

[said main body being provided at the rear end thereof with a] means
for communicating [hole through which the rear end of said water absorber communicates with
the outside] air between said hollow interior of said main body and the exterior.